

NOTES ON FOUR LITTLE-KNOWN SPECIES OF KANGAROOS.

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(Four Text-figures.)

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MACROPUS MELANOPS Gould.

Proc. Zool. Soc., 1842, p. 10.

Although the external differences between *M. melanops* and *M. giganteus* have been emphasized (*Aust. Zool.*, iii (4), 1923, 145), the special skull and teeth characters of the former species have not received attention. Examination of a series of crania in the Australian Museum shows that *M. melanops* has skull and dental features that differentiate it from other kangaroos and justify it receiving specific rank.

Skull.—The anterior palate is narrow, its least breadth going $4.4\frac{1}{2}$ times into the length of the diastema, as against $3.3\frac{1}{2}$ times in *giganteus*, while the posterior palate is usually more perforated than in the latter species. The basi-zygomatic is broad, twisted at right angles, and generally recurved, with the anterior angle acute (Text-fig. A). The same bone in *giganteus* is stouter, narrower, with the anterior face blunted and, except in aged animals, not recurved (Text-fig. C).

Teeth.—*M. melanops* has I^3 comparatively small, its breadth being only two-thirds that of I^2 and I^1 combined, while the anterior notch is not always clearly indicated (Text-fig. B). P^1 is very small, its length being only one-half to two-thirds that of P^2 . These teeth are thus very different in size from those of *M. giganteus* (Text-fig. D).

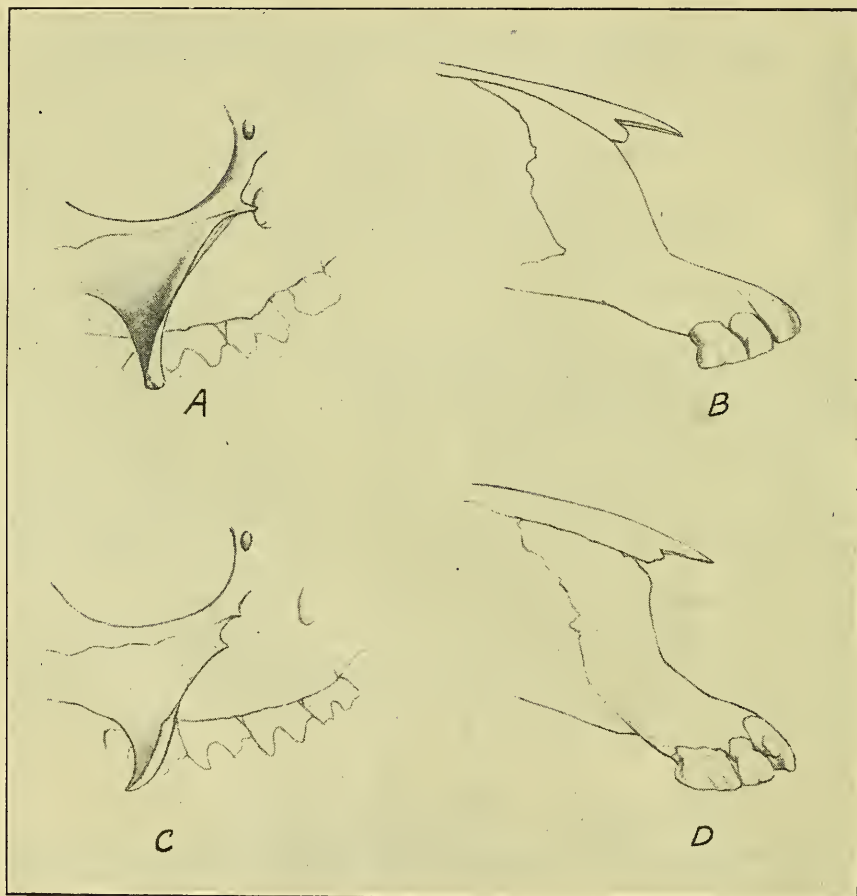
MACROPUS HAGENBECKI Rothschild.

Nov. Zool., xii, 1905, 509; xiv, 1907, 333; xvii, 1910, 108.

The first description of this species, without skull or teeth characters, led one to believe that it was allied to *M. rufus*. Examination of the type in the Tring Museum, however, shows that it is closer to the *robustus* group, with which it agrees in build of the body, shape of the rhinarium, arrangement of hair on the face, and complete posterior palate. It agrees with *M. rufus* in character of the coat, which is dense and woolly, facial markings, contour of the face, a broad occipital process, and the absence of small connecting bridges to the anterior bar of the molars. The sexes are alike in colouration. In appearance it is like a red wallaroo with a woolly coat, and having the characteristic facial markings of the Red Kangaroo. It is apparently intermediate between the two, and, I judge, quite a good species. The locality from which the specimens came is unknown. Its woolly coat, however, indicated a cold climate, and one would expect to find it on the higher ranges of Arnhem Land.

MACROPUS BERNARDUS Thomas.

This species apparently occupies a restricted territory on the South Alligator River. It is a small animal, allied to the *robustus* group, with which it agrees in build, character of the hair, colouration of the sexes (*Aust. Zool.*, ii (4), 1922, 142), complete posterior palate, and some teeth characters. It differs, however, in certain



Text-figs. A-D.

- A. Basi-zygomatic of *Macropus melanops*.
- B. Incisors of *M. melanops*.
- C. Basi-zygomatic of *M. giganteus*.
- D. Incisors of *M. giganteus*.

skull formations mentioned by Thomas (*Nov. Zool.*, 1904, 225), and also has dental features which do not appear to have been mentioned hitherto. These, together with additional skull characters, are here recorded.

Skull.—Compared with *robustus* the adult cranium is much smaller, more lightly built and flatter in profile. The nostrils are a little bowed at the sides,

nasals expanded posteriorly, and produced anteriorly in a comparatively long blunt point; postorbital process distinctly indicated; infra-zygomatic process very short and blunt; incisive foramina long, reaching the incisive suture. The least width of the posterior palate goes into the length of the diastema about twice.

Teeth.—Molars with a narrow anterior ledge and a small connecting bridge. The third and second incisors appear to be diagnostic of this species, the notch in both being strongly marked; the exposed portion of I³ is completely cleft, the tooth appearing as if double, with the anterior fold partly overlying the posterior section.

MACROPUS GIGANTEUS TASMANIENSIS Le Souef.

Aust. Zool., iii (4), 1923, 146.

Very few authenticated specimens of the Tasmanian Forester Kangaroo seem to have been preserved in museums, and the animal has not received much attention. Gould obtained one large male, with a damaged skull, which is now in the British Museum (Natural History). Mr. Reid, curator of the Zoological Gardens, Hobart, kindly forwarded the skulls and skins of two females which have been placed in the Australian Museum, Sydney. Examination of these three

Table of Skull Measurements (in millimetres).

	<i>M. melanops.</i>			<i>M. hagenbecki.</i>	<i>M. bernardus.</i>	<i>M. g. tasmaniensis.</i>
	♀	♀				
Basal length	160	163	173	137	125	147
Greatest breadth	82	81	89	87		90
Nasals—						
Length	67	76	73	67	48	64
Greatest breadth	26	25	26	25.5	21	19.5
Central breadth	18	18	18	17	15	14
Palate—						
Length	112	114	—	96	83	99
Breadth outside M ² .. .	49.5	51	51	42.5	39	47
Breadth inside M ² .. .	30	30	28	27.5	21	28
Palatal foramen	—	—	14	14	9	9
Diastema	56	56	53	41	25	49
Basi cranial axis	45	45	50	38	35	41
Basi facial axis	115	118	123	106	90	118
Facial index	262	262	246	278	257	287

specimens, together with several live ones in the City Park, Launceston, and the Hobart Zoological Garden, has enabled more definite information to be gathered concerning the subspecies. It is closely allied to *M. giganteus giganteus* of the mainland, apparently differing only in having the teeth comparatively larger, and the basi-zygomatic broader and recurved. External appearance is the same in the typical species and the Tasmanian subspecies. A previous description, indicating variations in colour, received from the Tasmanian Museum, was apparently based on *M. ruficollis bennettii* (*Aust. Zool.*, iii (4), 1923, 145).

Hair fine and dense (Autumn pelage). General colour above dark grey with a brownish wash, blackish on the dorsal area and lighter on the flanks; hairs on

the under surface are white tipped, especially on the inguinal region and chest; head coloured like the back, back of the ears coarsely haired; thighs brownish-grey; paws and toes black; tail darkening to blackish towards the tip.

The skull agrees with the typical mainland type, with exception that the basi-zygomatic is broad and recurved. The lower jaw is stouter, and all teeth comparatively larger, being 0.5 to 1 mm. greater in measurement than those of a *giganteus* of similar size.

Very few Tasmanian Forester Kangaroos appear to be left. Although totally protected, they are nevertheless caught in snares set for Bennett's Wallaby, and are apparently being rapidly destroyed.
